

全指向双麦克风规格书

客 户

CUSTOMER: 东风乘用车公司

项 目

PROJECT: G59 麦克风

件 号

COMPOENT: Z700036160

型 号

MODEL: DMK-G59-031

生效日期

DATE: 2020.06.05

重庆大明 CQDM	
DESIGNED 设计:	Wumingxue 吴明雪
CHECKED 审核:	Zhangwenjian 张文建
APPROVED 批准:	Liyongxing 李永兴

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New Sample Part No 新样品件号

Customer 客户	Project 项目	Model 型号	Specification No.规格号
东风乘用车公司	G59	DMK-G59-031	MIC-ODW-8V-001

Revision History for Sampling 样品修订历史

Revision 修订	Date 日期	Comments 备注	By 负责人
A/0	2020.06.05	Creation	吴明雪

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1.PURPOSE AND SCOPE

This document contains general DaMing requirements, qualification requirements, and those specific Electrical and mechanical requirements for this part.

1.目的和范围

本文件包含一般的大明要求、资格要求，以及本部分的特定电气和机械要求。

2.DESRIPTION AND APPLICATION

The microphone is one of the elements of audio. It is applied in the vehicles and automobile. The document describes the functions of the microphone and its input&output.

Vehicles equipped with the hands-free calling and voice recognition feature shall use the in-vehicle hands-free microphone(s) to capture the driver's speech and passenger's speech.

The microphone converts sound pressure level to an electrical signal. This electrical signal shall be sent to the hands-free and voice recognition system in the radio.

The microphone(s) should be located in the vehicle to achieve the best signal-to-noise ratio. In this concept, the signal represents the driver's speech and passenger's speech, whereas the noises are the directed and non-directed acoustical noise. Noise includes, but not limited to, the following examples: wind noise, road noise, HVAC fan noise, speech from rear passengers.

Vehicles shall package the hands-free microphone(s) located in the optimized position for the driver's speak and first row passenger's speech.

2. 描述和应用

麦克风是音频的组成部分之一。它适用于汽车和机动车。该文件描述了麦克风的功能及其输入和输出。

配备免提呼叫和语音识别功能的车辆应使用车载免提麦克风（s）来捕捉司机的讲话和乘客的讲话。

麦克风将声音的压力水平转换成电信号。该电子信号应发送到无线电的免提和语音识别系统。

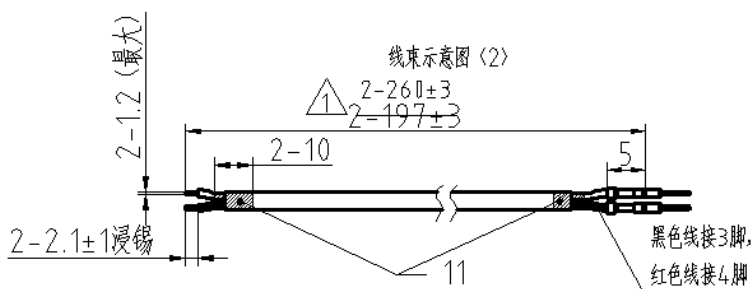
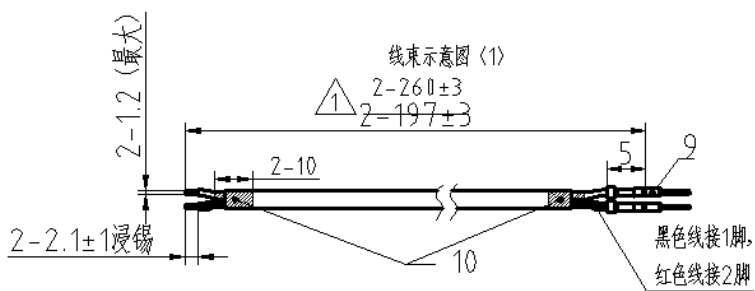
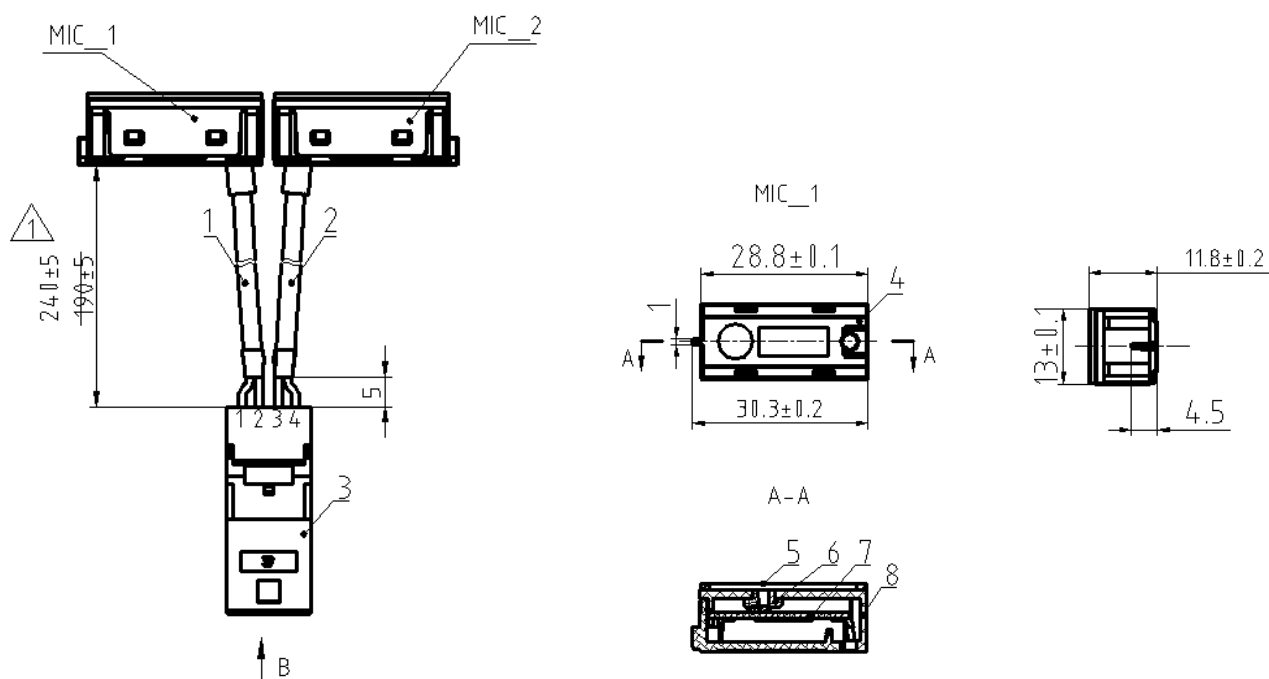
麦克风（s）应该位于车辆内，以达到最好的信噪比。在这个概念中，信号表示驾驶员的讲话和乘客的讲话，而噪音则是定向和非定向的声学噪音。噪音包括，但不限于以下的例子：风噪声，道路噪音，空调风机噪音，后排乘客的讲话。

应将免提麦克风（s）放置在适于驾驶员说话和前排乘客讲话的车内位置。

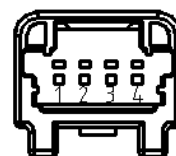
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3.PRODUCT SCOPE 产品范围

3.1 The finished product Mechanical Characteristics 成品机械特性



B向视图
2:1



接口定义

引脚	功 能	颜色
1	MIC_SHIELD_GND_1	黑色
2	MIC+ MIC_PI_1	红色
3	MIC_SHIELD_GND_2	黑色
4	MIC+ MIC_PI_2	红色

合格标签内容示意图

零件名称	→	XXXXXXXX
零件号	→	XXXXXXXX
通知书号	→	S0019392

装配在顶灯总成内部
不需贴此标签

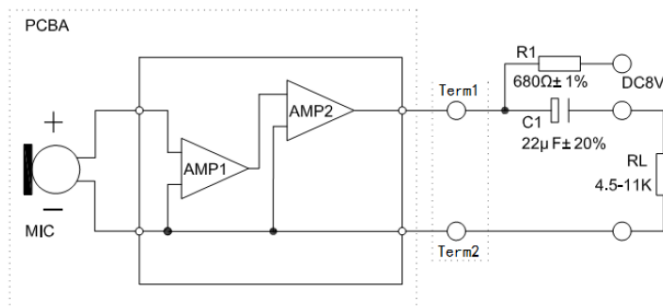
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3.2 Microphone specification (finished product) 麦克风规格 (成品)

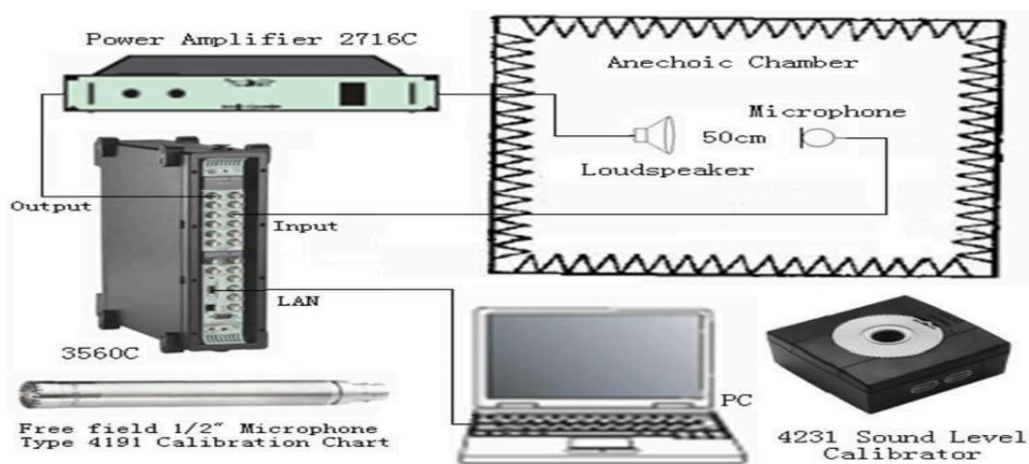
Model 型号	DMK-G59-031
Transducer 传声器	Analog MEMS Microphone 模拟 MEMS 传声器
Operating Temp Range 工作温度范围	-40°C~+85°C
Storage temp range 存储温度范围	-40°C~+90°C
Output impedance 输出阻抗	Max:200Ω
Sensitivity 灵敏度	-6±2dB @F=1kHz,@94dBspl, Vs=8V
Direction 指向性	Omni-directional 全指向
Bandwidth 带宽	100(+/-10%) ~ 10000(+/-1%)HZ
Operation voltage 工作电压	8.0V±10%
Current consumption 电流消耗	Max:10mA
Noise Lever 噪声水平 (A 加权)	<600uV
S/N ratio 信噪比	Min60dB @F=1kHz 94dbspl 8.0V±10%
THD (A-Weighted Curve) 失真 (A 加权曲线)	<1% @F=1kHz 94dbspl 8.0V±10%
MAX input s.p.l 最大输入 spl	>106dB
Frequency response 频率响应	与 1kHz 灵敏度相比, 200Hz 灵敏度≥-14dB; 100Hz 灵敏度≥-18dB

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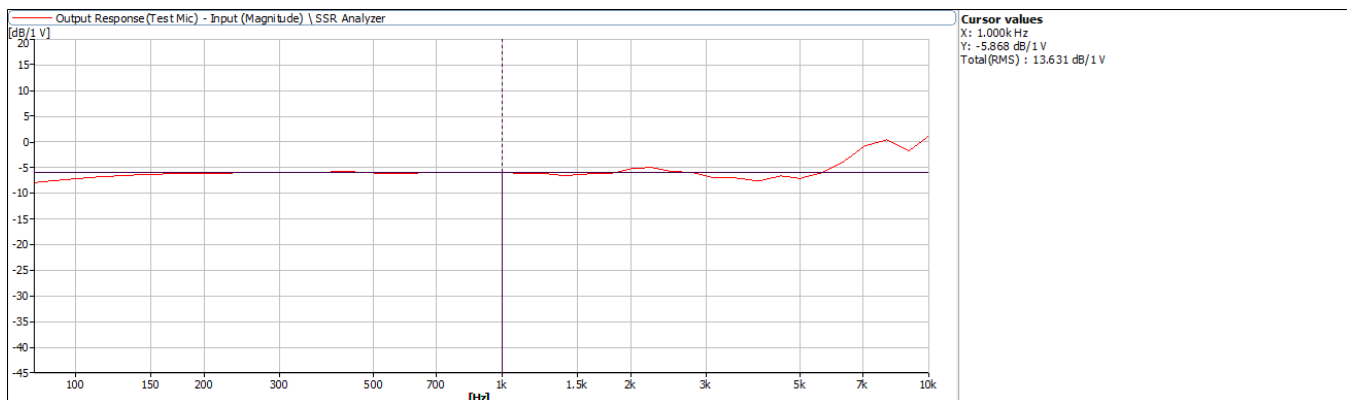
3.3 Test circuit 测试电路



3.4 Measurement System 测量系统



3.5 Typical Frequency Response Curve 典型频率响应曲线



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4. Reliability characteristics 可靠性特点

TEST 测试	Condition 条件	Remarks 备注
Standard Tests 标准测试		
Storage-cold (Power Off)低温储藏 (断电)	-40°C, 96h	Product must withstand and return to specified limits after 2h recovery time 产品在 2 h 恢复时间后必须承受并返回 t0 指定的限制
Storage-dry heat (Power Off)高温储藏 (断电)	+90°C, 96h	Product must withstand and return to specified limits after 2h recovery time 产品在 2 h 恢复时间后必须承受并返回 t0 指定的限制
Operational-cold 低温操作	-40°C, 3h	Product must operate 产品必须能工作
Operational-dry heat 高温操作	+85°C, 3h	Product must operate 产品必须能工作
Temperature Cycle test-non operating 温度循环 无操作测试	-40 °C / +85 °C , 2h hot , 2h cold , 10 cycles.	Product must operate 产品必须能工作
Drop Test 坠落试验	Drop on 4cm wooden plate from a height of 1.5m 从 1.5m 米的高度坠落至 4 厘米的木盘上	Product must withstand 产品必须承受住
Humidity tests 耐湿试验	40 °C , 93%RH, 4~180days	Product must withstand and return to specified limits after 2h recovery time 产品在 2 h 恢复时间后必须承受并返回 t0 指定的限制
Sinusoidal vibration test 正弦振动试验	25Hz, 20g, 16 hours in 3 axes	Product must operate 产品必须能工作